



# Software design specification document

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# CS352: Sprint SDS - Attack on FCAI - OrderNotificationModule

## SDS document

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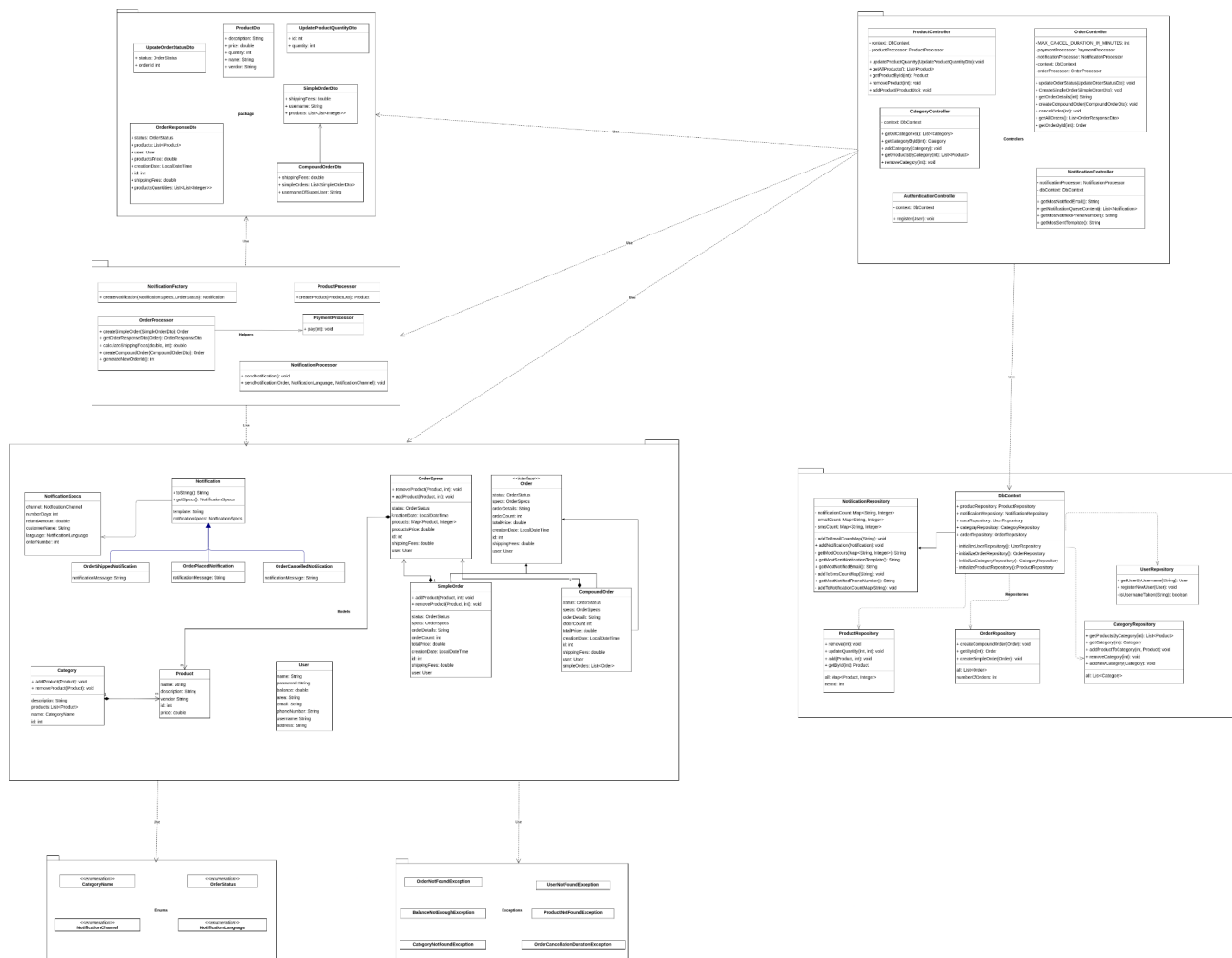
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### Class diagram design





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### Class diagram Explanation

In this class diagram, two design patterns were employed. the Factory pattern and the Composite pattern

#### 1. Factory Pattern in Notification SubSystem:

The Factory Pattern is applied to the Notification SubSystem to provide a centralized mechanism for creating various types of notifications (Email, and SMS).

#### 2. Composite Pattern in Order SubSystem:

The composite pattern is evident in the Order hierarchy, where SimpleOrder and CompoundOrder both implement the Order interface. This allows for treating individual orders and compound orders uniformly.



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### Requirements Exposure as Web Service API

#### Part 1: Exposed Postman Collection

#### Part 2:

Requirement	Exposed API
The system should return all existing products in the memory database	1- Get/products/get-all A service to get a list of all products .
The system should check if there is a product with that id or not and return a product with that id if it exists.	2- Get/products/get-by-id/{id} A service to return a product with id in the path.
The system receives a product in the request body and add it in the memory database	3-Post/products/add A service to add a product in a memory database .
The system receives a quantity and product id in the request body and update that product with a valid quantity	4-Put/products/update-quantity A service to update a product with a valid quantity .
The system should check if there is a product with that id or not and delete a product with that id if it exists.	5-Delete/products/remove/{id} A service to delete a product with id in the path.



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The system should receive a user in the request body and register that user in the memory database .	6- Post/auth/register A service to add new users in a memory database .
The system should return all existing categories in the memory database.	7- Get/categories/get-all A service to get a list of all categories.
The system should check if there is a category with that id or not and return a category with that id if it exists.	8- Get/categories/get-by-id/{id} A service to return a category with id in the path.
The system should check if there is a category with that id or not and return all products in the category with that id if it exists.	9-Get/categories/get-products-by-category-id/{categoryId} A service to get a list of all products in the category with categoryId in the path .
The system should receive a category in the request body and add it in memory database	10-Post/categories/add-new-category A service to add a category in a memory database .
The system should check if there is a category with that id or not and delete a category with that id if it exists.	11-Delete/categories/remove/{id} A service to delete a category with id in the path.
The system should return all existing orders in the memory database.	12- Get/orders/get-all A service to get a list of all orders.
The system should check if there is an order with that id or not and return an order with that id if it exists.	13- Get/orders/get-by-id/{id} A service to return an order with id in the path.
The system should check if there is an order with that id or not and return all order details with that id if it exists.	14-Get/orders/get-order-details/{id}



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		A service to return all order details with id in the path.
The system should receive an order id and order status in the request body and check if there is an order with that id or not and change the current status with that id if it exists.	15-Put/orders/update-order-status	A service to return all order details with id in the path.
The system should receive the simple order data in the request body and calculate its price with shipping fees and add it in a memory database .	16-Post/orders/create-simple-order	A service to create a simple order and add it in a memory database .
The system should receive the compound order data in the request body and calculate its price after discount Percentage in shipping fees and add it in a memory database .	17-Post/orders/create-compound-	A service to create a compound order and add it in a memory database
The system should check if there is an order with that id or not and cancel that order if the status is placed, but if the status is shipped it should check the allowed period of cancellation.	18-Delete/orders/cancel-order/{id}	A service to delete an order with id in the path.
The system should return a list the current notifications as a Queue.	19-Get/notifications/get-notification-queue	A service to return a queue of notifications
The system should count number of sends of each notification template and return The most sent notification template	20-Get/notifications/get-most-sent-template	A service to return The most sent notification template



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The system should count number of sends of each email and return The most notified email		21-Get/notifications/get-most-notified-email A service to return The most notified email
The system should count number of sends of each phone number and return The most notified phone number		22-Get/notifications/get-most-notified-phone-number A service to return The most notified phone number